

ABSTRACT OF THE DISCLOSURE

The invention provides high resolution X-ray crystal structures of the 30S ribosome, obtained from *Thermus thermophilus* 30S subunit, having a tetragonal space group $P4_12_12$ to which are bound an antibiotic selected from the group paromomycin, streptomycin, spectinomycin, tetracycline, pactamycin and hygromycin B. An advantageous feature of the structure is that it diffracts at about 3Å resolution. The invention also provides a crystal of 30S having the three dimensional atomic coordinates of the 30S ribosome, the coordinates being provided in any one of tables 1 to 4. The data may be used for the rational design and modelling of inhibitors for the 30S ribosome, which have potential use as antibiotics.